REMARKS

Claims 1-20 are pending in this application. Attached hereto is a complete listing of all claims in the application, with their current status listed parenthetically. By this Response, claim 14 has been amended. The amendment to claim 14 has been drafted to impart precision into the claim by more particularly pointing out the invention. The claim amendment has not been drafted to overcome any prior art.

In the Specification

Applicant amends selected paragraphs of the specification to correctly reflect the issuance of U.S. patent 6,597,683.

Rejection Under 35 U.S.C. § 112, 1st paragraph

In paragraphs 1 and 2 of the Office Action, the Examiner rejects claims 1-20 under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement. Specifically, the Examiner states:

> "The amended specification and the existing specification does not enable one skilled in the art to make and/or use the invention of an ultra wide band network using a TDMA frame format. How does ultra wide band network [*sic*] enable TDMA? In other words, the specification does not describe in such a way to enable how the ultra wide band network implements the TDMA."

Applicant respectfully traverses this rejection. FIG. 1 of the originally-filed specification is described as "a block diagram of an illustrative network system which employs unguided media suitable for use with the protocol of the present invention." FIG. 1 shows a master 12 and several exemplary slave devices 14a-n, which are illustrated communicating via wireless communication signals. FIG. 2 is of the originally-filed specification is described as "a Time Division Multiple Access protocol frame definition in accordance with the present invention."

FIG. 2, as well as FIGS. 3a and 3b depict the specific, detailed construction of the Time Division Multiple Access (TDMA) protocol frame definition. In addition, most of the originally-filed specification describes in detail the construction and operation of the TDMA protocol.

In answer to the Examiner's questions: "How does ultra wide band network [*sic*] enable TDMA? In other words, the specification does not describe in such a way to enable how the ultra wide band network implements the TDMA," Applicant submits that the illustrative network of master and slave devices shown in FIG. 1 employ ultra wide band signals to wirelessly communicate using the TDMA frame, or protocol shown in FIGS. 2-3b, and described in detail in the specification.

Specifically, there are many means known in the art for wirelessly transmitting data. "A patent need not teach, and preferably omits, what is well known in the art." M.P.E.P. 2164.01. Ultra wide band technology is a technology that is well known in the art of communications. Attached in **Exhibit A** of Applicant's March 18, 2005 Response is "A Brief History of UWB Communications," which discloses that by 1989 (11 years before Applicant's priority date), Sperry Corporation had been awarded over 50 patents, and ultra wide band (UWB) had been in development for nearly 30 years (page 2, 1st paragraph). Thus, as of Applicant's priority date, UWB had been in development for at least 40 years.

"As long as the specification discloses at least one method for making and using the claimed invention that bears a reasonable correlation to the entire scope of the claim, then the enablement requirement of 35 U.S.C. § 112 is satisfied." M.P.E.P. 2164.01(b).

As acknowledged by the Examiner, ultra wide band is disclosed in Applicant's specification, specifically:

> "The MAC protocol of the present invention may be utilized in various network configurations and topologies including, for example, guided or wired media as well as unguided or wireless media. The MAC protocol is particularly advantageous in wireless network configurations because of the error-correction

> and communication management features provided by the invention. Such an illustrative wireless network is a synchronous wireless network comprising a plurality of transceiver devices transmitting and receiving pulses using a baseband or "ultra wide band" transport. Under this network configuration the MAC protocol and method of the present invention provide communication management, flow control, and failure-recovery for the shared air transport medium." (page 8, as amended) [emphasis added]

In this part of the specification, Applicant discloses different types of network configurations that may employ the MAC protocol of the present invention. Applicant's claim 1 recites:

> An ultra wide band network, comprising:
> a master device and a plurality of slave devices in network communication with said master device, the communication using a Time Division Multiple Access frame comprising a multiplicity of ultra wide band signals;
> a Medium Access Control layer protocol for transmission and reception of network packets, comprising:
> a Time Division Multiple Access frame definition having,
> a start-of-frame section,
> a command section,
> a data slot section containing a plurality of variable length slots,
> a synchronization slot, and
> a timestamp slot.

A comparison between the specification and the claim reveals that Applicant is claiming what is disclosed in the originally-filed specification. "The amount of guidance or direction needed to enable the invention is inversely related to the amount of knowledge in the state of the art as well as the predictability in the art. . .**A single embodiment may provide broad enablement in cases involving predictable factors, such as mechanical or electrical elements." M.P.E.P. 2164.03.** Applicant's invention is in the realm of the electrical arts, and thus is a case which involves predictable factors.

Moreover, a case recently-decided by the Court of Appeals for the Federal Circuit (CAFC) (*Falko-Gunter Falkner et al. v. Stephen C. Inglis et al.*, No. 05-1324 (May, 26, 2006)) **affirmed a decision of the Board of Patent Appeals an Interferences** holding that the Inglis

'04 application satisfied the enablement requirement even though "the mere fact that the experimentation may have been difficult and time consuming does not mandate a conclusion that such experimentation would have been considered 'undue'." The CAFC then repeated M.P.E.P. 2164.01: "A patent need not teach, and preferably omits, what is well known in the art."

Applicant submits that the amount of experimentation required to construct a network of master and slave devices communicating using ultra wide band signals transmitting a TDMA protocol as illustrated and described in the specification would be significantly less than the amount required in the above-cited case, of which the specification was found to be enabling.

This is because the electrical arts are considered predictable, and one skilled in the UWB art could develop an ultra wide band network employing TDMA frames or protocol using Applicant's disclosure. The ultra wide band signals used to transmit the TDMA frame are generated by an ultra wide band transmitter, which have been in existence for 40 years. For example, ultra wide band transmitters are disclosed in several references cited by the Examiner, as well as references listed in Applicant's Information Disclosure Statement.

In view of the above discussion, Applicant submits that claims 1-20 are enabled, and thus respectfully requests the Examiner to reconsider and withdraw this rejection.

Rejection Under 35 U.S.C. § 101

In paragraphs 3 and 4 of the Office Action, the Examiner rejects claims 1, 9, 14 and 20 under 35 U.S.C. § 101, because the invention is directed to non-statutory subject matter. Specifically, the Examiner rejects claims 1, 9 and 20, cites the Interim Guideline for Examination of Patent Applications for Patent Subject Matter Eligibility ("Interim Guideline") and states:

> "the claims seek patent protection of a signal. Moreover, it does not appear that claims reciting a multiplicity of ultra wide band signal [sic] encoded

with functional descriptive material falls within any of the categories of patentable subject matter set forth in § 101."

Regarding claim 14, the Examiner rejects the claim, cites the Interim Guideline, and states:

> "the claims [sic] see for patent protection of a signal. Moreover, it does not appear that claims reciting a multiplicity of ultra wide band signal [sic] encoded with functional descriptive material falls within any of the categories of patentable subject matter set forth in § 101. In addition, according to ANNEX IV-Computer Readable Nonstatutory Subject Matter section of the Interim Guideline for Examination of Patent Applications for Patent Subject Matter Eligibility, the computer program is not embodied or encoded on a computer read-able medium."

As discussed below, Applicant respectfully traverses this rejection.

Applicant amends claim 14 to now positively recite that the computer program is embodied on a computer read-able medium. Specifically, claim 14 now recites, in part: "A computer program product for scheduling the assignment of variable length data slots in a network system. . ."

Regarding claims 1, 9 and 20, Applicant is claiming a Network comprised of devices (master, slaves) that communicate by using ultra wide band signals transmitted according to a specific TDMA structure. That is, claims 1, 9 and 20 are not directed to a computer program product, but instead, claim a network of communication devices, which is a machine, and machines are one of the enumerated statutory invention categories defined in 35 U.S.C. § 101 (see Interim Guideline, sect. IV, part B).

In view of the above, Applicant respectfully requests that the Examiner reconsider and withdraw this rejection.

Conclusion

Applicant believes that this Response has addressed all items in the Office Action and now places the application in condition for allowance. Accordingly, favorable reconsideration and allowance of claims 1-20 at an early date is solicited. Authorization to charge the fee for a one-month extension of time to our Deposit Account No. 50-3143, in the name of Pulse-Link, accompanies this Response. Should any issues remain unresolved, the Examiner is invited to telephone the undersigned.

Respectfully submitted,

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Date

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